WHAT IS CLAIMED IS:

1.   A computer system that allows front-end software applications to use multiple versions of a data mining model during execution of analytical tasks, the computer system comprising:

5   a model version selection module that is operable to use a task name in a task request received from a front-end software application to determine a specific version of a data mining model to be used during execution of an analytical task; and

a mapping module that is operable to map input data included in the task request received from the front-end software application into a format usable by the specific version

10   of the data mining model.

2.   The computer system of claim 1, wherein the mapping module is operable to map input data included in the task request into a format usable by any version of the data mining model.

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3.   The computer system of claim 1, wherein the mapping module is further operable to map output data generated upon execution of the analytical task into a format usable by the front-end software application.

20   4.   The computer system of claim 1, wherein the analytical task is a prediction task.

5.   A computer-implemented method for using multiple versions of a data mining model during execution of analytical tasks, the method comprising:

obtaining a first task request from a front-end software application, the first task

25   request containing a first set of input values and a task name;

using the task name to identify a first version of the data mining model to be used when executing a first analytical task;

using a first input mapping function to map the first set of input values into a first set of mapped input values for use by the first version of the data mining model when executing

30   the first analytical task;

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obtaining a second task request from the front-end software application, the second task request containing a second set of input values and the task name, and the second set of input values being a subset of the first set of input values;

using the task name to identify a second version of the data mining model to be used when executing a second analytical task; and

using a second input mapping function to map the second set of input values into a second set of mapped input values for use by the second version of the data mining model when executing the second analytical task.

6.   The computer-implemented method of claim 5, wherein each one of the second set of input values has a data type that substantially matches a data type of one of the input values from the first set of input values.

7.   The computer-implemented method of claim 5, wherein the method further comprises:

sending a first set of output values generated upon execution of the first analytical task to the front-end software application; and

sending a second set of output values generated upon execution of the second analytical task to the front-end software application.

8.   The computer-implemented method of claim 7, wherein sending a second set of output values generated upon execution of the second analytical task to the front-end software application includes sending a second set of output values that are a subset of the first set of output values.

9.   The computer-implemented method of claim 8, wherein sending a second set of output values that are a subset of the first set of output values includes sending a second set of output values that each individually have a data type that substantially matches a data type of one of the output values from the first set of output values.

10.   The computer-implemented method of claim 7, wherein:

sending a first set of output values generated upon execution of the first analytical task to the front-end software application includes using a first output mapping function to map the first set of output values into a first set of mapped output values for use by the front-end software application; and

5   sending a second set of output values generated upon execution of the second analytical task to the front-end software application includes using a second output mapping function to map the second set of output values into a second set of mapped output values for use by the front-end software application.

10   11.   The computer-implemented method of claim 10, wherein the second output mapping function is substantially identical to the first output mapping function.

12.   The computer-implemented method of claim 5, wherein the second input mapping function is substantially identical to the first input mapping function.

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13.   The computer-implemented method of claim 5, wherein the first and second analytical tasks are prediction tasks.

14.   A computer-implemented method for designing a prediction task that includes version

20   information for a data mining model, the method comprising:

providing a mining model class identifier for a data mining model;

providing a unique version identifier to identify a unique version of the data mining model to be used during execution of a prediction task;

providing one or more input data fields to hold input information;

25   providing input mapping functionality to map the input information into mapped input information capable of being used by the unique version of the data mining model during execution of the prediction task;

providing one or more output data fields to hold output information generated upon execution of the prediction task; and

30   providing output mapping functionality to map the output information into mapped output information capable of being used by a front-end software application.

15.　The computer-implemented method of claim 14, wherein providing input mapping functionality includes providing input mapping functionality that is specific to the unique version of the data mining model to be used during execution of the prediction task.

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16.　The computer-implemented method of claim 14, wherein providing output mapping functionality includes providing output mapping functionality that is specific to the unique version of the data mining model used during execution of the prediction task.

10　17.　A computer-implemented method for using multiple versions of a data mining model during execution of analytical tasks, the method comprising:

importing a first version of a data mining model having a first set of model values, each model value having a data type;

using the first version of the data mining model during execution of a first set of

15　analytical tasks requested by a front-end software application;

importing a second version of the data mining model having a second set of model values, the second set of model values being a subset of the first set of model values; and

using the second version of the data mining model during execution of a second set of analytical tasks requested by the front-end software application.

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18.　The computer-implemented method of claim 17, wherein importing a second version of the data mining model having a second set of model values includes importing a second version of the data mining model having a second set of model values that each individually have a data type that substantially matches the data type of one of the model values from the

25　first set.

19.　The computer-implemented method of claim 17, wherein the first and second sets of analytical tasks are prediction tasks.

30　20.　The computer-implemented method of claim 17, wherein:

importing a first version of a data mining model includes importing a first version of a data mining model that is defined using the Predictive Modeling Markup Language (PMML); and

importing a second version of the data mining model includes importing a second version of the data mining model that is defined using PMML.

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